

REMARKS

These remarks are responsive to the Office Action mailed on January 7, 2008 (“the Office Action”). The Applicants thank the Examiner for a careful and thorough examination of the above-referenced Application.

Status of the Claims

At the time of the Office Action, claims 1-114 were pending, with claims 1-114 being rejected. Claims 1-31, 48-111, 113 and 114 are hereby canceled. Claims 32, 40, 41, 46, and 112 are amended herein. Claims 115-135 are added herein. Support for these amendments may be found throughout the Specification and in the Claims themselves. No new matter is being submitted. After entry of the present amendment, claims 32-47, 112, 115-135 will be pending.

Status of the Specification

Paragraphs 0065, 0087-0090, and 0092 have been amended. Support may be found in original claims 20, 40, 42, 62, 90, 103, 106, 108, and 109, paragraphs 0017, 0088, and 0089 as well as originally filed Figures 2, 22 and 25. No new matter is submitted.

Drawings

The drawings are objected to as failing to comply with 37 C.F.R. § 1.83(a) for allegedly failing to show every feature of the claimed invention. Office Action, p. 2. Specifically, the Examiner has asserted that a “package of signal conditioning and amplification electronics,” an “internal coil,” a “data storage element,” a “micro battery,” a “capacitor,” and “electronics needing no signal conditioning” were allegedly not shown in the Figures. Accordingly, Figure 25 has been amended, and appropriate replacement

sheets are submitted herewith. Furthermore, the Specification has been amended at paragraphs 0087-0090, and 0092. No new matter has been entered, as support for these changes may be found in the Specification, Figures, and the Claims as originally filed. Accordingly, the drawings now comply with 37 C.F.R. § 1.83(a) and the Applicants respectfully request that this objection be removed.

The drawings additionally are objected to as failing to comply with 37 C.F.R. § 1.84(p)(5) because reference numbers 10, 27, 20, 30, 91 are allegedly not shown in the drawings. Office Action, p. 3. Accordingly, Figures 26-29 and paragraph 0087 are hereby amended, and appropriate replacement sheets submitted herewith. The Applicants respectfully submit that the drawings are now in compliance with 1.84(p)(5), and requests the Examiner to remove these objections.

Reference number “10” is also shown in Figures 3, 3a, 3b, 3c, 4, 5, 6, 7, 9, 11, 14, 17, 18, 21 and 23. Reference number “20” is also shown in Figures 3, 3a, 3b, 3c, 4, 6, 7, 8, 9, 10, 14, 17, 18 and 21. Reference number “27” is also shown in Figures 3, 3a, 3b, 3c, 4, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 19, 21 and 23. Reference number “30” is also shown in Figures 3, 3a, 3b, 3c, 5, 6, 8, 10, 14, 15, 17, 18, 20, 21, 22 and 25. Reference number “91” is also shown in Figures 8, 9, 12, 13, 16, 18 and 23.

The Applicants respectfully submit that the drawings are now in compliance with 37 C.F.R. §§ 1.83(a) and 1.84(p)(5), and requests the Examiner to remove these objections.

Claim Objections

Pending claim 112 has been objected to for an alleged informality. After reviewing the original Specification and claims, no amendments have been made to claim

112 with respect to the term “polymeric cushion.” The term “polymer” is used to describe the cushion between the endplates in the originally filed Figure 25, as well as in ¶¶ 0017, 0088, and 0089. “Polymeric” means “of, relating to, or consisting of a polymer.” Webster’s Third New Int’l Dictionary p. 1759 (1981).

Paragraph 0065 of the Specification has been amended to further reflect this claimed embodiment. No new matter has been added by this amendment. The Applicants respectfully request that these objections be removed.

35 U.S.C. § 112 Rejections

Pending claim 42 currently stands rejected under 35 U.S.C. § 112, first paragraph, for allegedly failing to comply with the enablement requirement. Office Action, p. 6. With respect to claim 42, paragraph [0090] of the Specification has been amended to reflect this claimed embodiment. No new matter has been added by this amendment as support may be found in the claims as filed. MPEP §§ 608.04; 2163.06. Claims 22, 26, 64, 68, 92, and 96 have been canceled. The Applicants respectfully request that these rejections be removed.

Pending claims 40, 41, and 46 currently stand rejected under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite. Office Action, p. 7. Appropriate amendments are submitted herein.

35 U.S.C. § 102 Rejections

Pending claims 32, 34, 38, and 112 currently stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Harrington (U.S. Patent No. 5,893,889). Office Action, p. 11. As stated in M.P.E.P. § 2131, “[a] claim is anticipated only if each and

every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”

As the Examiner states, Harrington discloses a first projection that is frustoconical surface of collar 54 and a second projection that is frustoconical surface of lower member 34. Office Action, p. 15. However, Harrington fails to disclose a structure “wherein contact between said first distal end of said first projection and said second distal end of said second projection limits said first endplate and said second endplate from moving relatively closer to one another,” as presently claimed. Harrington teaches two frustoconical surfaces 44, 58 with a gap therebetween. However, these frustoconical surfaces never contact each other to limit motion between two endplates. Instead, Harrington discloses a ball-and-internal-socket contact arrangement with spherical upper end 46 and lower surface 51 of base portion 49. Harrington, col. 3, l. 67 – col. 4, l. 9. Thus, Harrington employs contact of the structure of a pivot ball 46 and *internal* lower surface 51 to limit motion. By contrast, amended claims 32 and 112 require distal ends of projections to come into contact to prevent further movement.

Harrington’s lower surface 51 cannot be considered a distal end of a projection. Harrington’s lower surface 51 is located within a cavity that is proximal to its respective endplate. This ball-and-socket arrangement is the antithesis of the distal-end-to-distal-end structure of amended claims 32 and 112. Thus, Harrington fails to disclose every claim limitation of the claimed invention.

For at least the reasons set forth herein, the Applicants respectfully submit that the cited reference fails to anticipate independent claims 32 and 112, or any claim depending therefrom. Thus, the Applicants respectfully request that this rejection be withdrawn.

35 U.S.C. § 103 Rejections

The following pending claims stand rejected under 35 U.S.C. § 103(a) for the following reasons:

- Claims 33, and 35-37: allegedly being unpatentable over Harrington. Office Action, p. 27.
- Claim 39: allegedly being unpatentable over Harrington, in view of Ishikawa, *et al.* (U.S. Patent No. 6,447,448). Office Action, p. 32.
- Claim 42: allegedly being unpatentable over Harrington, in view of Ishikawa, *et al.*, and further in view of Wanderman, *et al.* (U.S. Patent No. 5,511,561) and Medical Electronics Manufacturing (hereinafter referred to as “MEM”; Dorren, Sonny, Designing Compact Medical Devices with Flex Circuitry. Office Action, p. 36.
- Claims 43, 46, and 47: allegedly being unpatentable over Harrington, in view of Steffee (U.S. Patent No. 5,071,437). Office Action, p. 37.
- Claim 44: allegedly being unpatentable over Harrington, in view of Steffee and further in view of Cauthen (U.S. Patent No. 6,179,874). Office Action, p. 39.
- Claim 45: allegedly being unpatentable over Harrington, in view of Steffee and Cauthen and further in view of Kenna (U.S. Patent No. 4,714,469) and Wang, *et al.* (U.S. Patent No. 4,714,468). Office Action, p. 39
- Claims 40 and 41: allegedly being unpatentable over Harrington, in view of Ishikawa, *et al.*, and further in view of Kovacevic (U.S. Patent No. 5,197,488). Office Action, p. 41.

With respect to currently amended claim 32, and to all claims depending from claim 32, none of the cited references disclose or even suggest the claimed structure

“wherein contact between said first distal end of said first projection and said second distal end of said second projection limits said first endplate and said second endplate from moving relatively closer to one another.” (Hereinafter the “contact limitation”).

An asserted combination must teach or suggest each and every feature of a claim to establish a *prima facie* case of obviousness under 35 U.S.C. § 103. For the reasons asserted herein, the structure of claim 32, and all claims depending therefrom, cannot reasonably be said to be present in the asserted combinations.

As noted above, Harrington fails to disclose the “contact limitation” of amended claim 32.

Ishikawa, *et al.* is only directed to electronics and is silent as to the “contact limitation” structure. Therefore the Harrington/Ishikawa combination also fails to render the present invention obvious.

Wanderman, *et al.* is directed to a foot-pad monitor to detect the amount of force transmitted through a heel, and is silent as to this structure. MEM allegedly teaches that flex circuits can be used in medical implants, however is silent as to the above-quoted structure. Therefore the Harrington/Ishikawa/Wanderman/MEM combination also fails to render the present invention obvious.

Steffee discloses a spinal disc prosthesis with an elastomeric core, but it is also silent with respect to the “contact limitation” structure. Therefore, the Harrington/Steffee combination fails to render the present invention obvious.

Likewise, Cauthen and Kenna disclose spinal implants for intervertebral disc replacement, but fail to disclose the above-quoted structure of claim 32. Therefore, the

Harrington/Steffee/Cauthen combination and the Harrington/Steffee/Cauthen/Kenna combination both fail to render the present invention obvious.

Wang, *et al.* teaches a prosthesis formed from a dispersion strengthened cobalt-chromium-molybdenum alloy, but fails to disclose the claimed structure. Accordingly, the Harrington/Steffee/Cauthen/Kenna/Wang combination fails to render the present invention obvious.

Kovacevic discloses a system for measuring dynamic forces applied to a prosthetic joint, but is silent as to the disclosed structure of currently amended claim 32. Therefore, the Harrington/Ishikawa/Kovacevic combination also fails to render the present invention obvious.

For at least the reasons set forth herein, the Applicants respectfully submit that the cited references fail to anticipate independent claim 32, or any claim depending therefrom. Thus, the Applicants respectfully request that this rejection be withdrawn.

Conclusion

The Applicants respectfully submit that the application is in condition for allowance, and reconsideration and notice of allowance are respectfully requested. If the Examiner believes that prosecution might be advanced by discussing the application with the Applicants' counsel, in person or over the telephone, the Applicants' counsel would welcome the opportunity to do so.

Respectfully submitted,

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